DOCUMENT RESUME

ED 170 301 TM 007 674

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TITLE Calculation of Nonresponse-Adjusted Student Weights for Respondents to the NLS Base-Year and First Follow-up Surveys. RTI 220-884-3.
INSTITUTION Research Triangle Inst., Durham, N.C. Statistics Research Div.
PUB DATE Oct 75
NOTE 29p.; Not available in hard copy due to marginal legibility of original document

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Attrition (Research Studies); Followup Studies; Graduate Surveys; High School Graduates; Longitudinal Studies; *National Surveys; Postsecondary Education; Probability; Questionnaires; Research Design; *Response Style (Tests); *Sampling; Senior High Schools; *Statistical Analysis; *Weighted Scores
IDENTIFIERS *National Longitudinal Study High School Class 1972

ABSTRACT

The report traces the activities which led to the development of the adjusted weights--beginning with the basic National Longitudinal Study design, the base-year weight calculations, and the resurvey procedures. Next, the report describes the first follow-up weight calculations (including unadjusted student weights), nonresponse adjustment methodology, classifier variables, weighting classes, and the adjusted weights calculations. The last pages contain tables showing the nonresponse adjustment factors for each weighting class as well as the total number of students, total number of responding students, sum of all unadjusted weights, and the sum of the respondent unadjusted weights for each weighting class. (Author/CP)

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22U-884-3

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# CALCULATION OF NONRESPONSE-ADJUSTED STUDENT WEIGHTS FOR RESPONDENTS TO THE NLS BASE-YEAR AND FIRST FOLLOW-UP SURVEYS

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TM 004 764

October 1975

TABLE OF CONTENTS


| | | Page |
|---|---|---|
| LIST OF TABLES | | iii |
| I. | BACKGROUND INFORMATION | 1 |
| | A. Basic NLS Sample Design | 1 |
| | B. Base-Year Weight Calculations | 2 |
| | C. Resurveying Base-Year Nonrespondents | 6 |
| II. | FIRST FOLLOW-UP WEIGHT CALCULATIONS | 9 |
| | A. Unadjusted Student Weights | 9 |
| | B. Nonresponse Adjustment Methodology | 11 |
| | C. Assembling Classifier Variable Data | 12 |
| | D. Forming the Weighting Classes | 13 |
| | E. Calculating Adjusted Student Weights | 15 |

LIST OF TABLES


| | | Page |
|---|---|---|
| 1. | Base-Year School Participation Data | 2 |
| 2. | Base-Year Student Participation Data | 3 |
| 3. | Base-Year Student Instrument Response Rates | 3 |
| 4. | Number of Participating Schools, by Survey | 8 |
| 5. | Composition of the First Follow-Up Sample | 8 |
| 6. | Availability of Classifier Variable Values, by Variable | 14 |
| 7. | Availability of Classifier Variable Values, by Number of Variables Determined | 14 |
| 8. | Appropriate Weights for Various Data Sets and Variables | 17 |
| 9. | Response Groups Defined by Base-Year and First Follow-Up Responses | 18 |
| 10. | Nonresponse Adjustments for Weight Set W1 | 19 |
| 11. | Nonresponse Adjustments for Weight Set W2 | 20 |
| 12. | Nonresponse Adjustments for Weight Set W3 | 21 |
| 13. | Nonresponse Adjustments for Weight Set W4 | 22 |
| 14. | Nonresponse Adjustments for Weight Set W5 | 23 |
| 15. | Nonresponse Adjustments for Weight Set W6 | 24 |

# I. BACKGROUND INFORMATION

## A. Basic NLS Sample Design

The sample design may be described as a deeply stratified two-stage probability sample with schools as first-stage sampling units and students as second-stage units. The population consisted of all 1972 twelfth graders enrolled in all public, private, and church-affiliated high schools in the 50 States and the District of Columbia. The first-stage sampling frame was constructed from computerized school files maintained by USOE and by the National Catholic Education Association. The sample was designed and selected by Westat, Inc.[1/]

The school sampling frame was stratified into 600 final strata based on the following variables:

- Type of control (public or nonpublic),
- Geographic region (Northeast, North Central, South, and West),
- Grade 12 enrollment (less than 300; 300 to 599; 600 or more),
- Proximity to institutions of higher learning,
- Percentage minority group enrollment,
- Income level of the community, and
- Degree of urbanization.

In order to increase the numbers of disadvantaged students in the sample, schools located in low-income areas and schools with high proportions of minority group enrollments were sampled at approximately twice the sampling rate used for the remaining schools. Schools in the smallest grade 12 enrollment strata (less than 300 seniors) were selected with probabilities proportional to their estimated numbers of senior students and without replacement. Schools in the remaining strata were selected with equal probabilities and without replacement. Within each final stratum, four schools were selected initially and then two of the four were randomly selected and designated as the primary selections. The other two schools were retained as backup or substitute selections and were used in the sample only if one or both of the primary schools did not cooperate (e.g., refused, ineligible). Samples of 18 students per school were selected and five additional students were selected as alternates. The students were sampled with equal probabilities and without replacement within schools.

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[1/] For details, see Sample Design for the Selection of a Sample of Schools with Twelfth-Graders for a Longitudinal Study, ERIC.

B. Base-Year Weight Calculations

Although the NLS sample included 1,200 primary selections (schools) and a planned total of 21,600 sample students, school and student nonresponse encountered in the Base-Year survey reduced these numbers considerably. A total of 1,069 schools and 18,143 students participated in the survey, including backup schools and alternate students. A participating school was defined as a school with at least one completed student questionnaire, test battery, or SRIF; a participating student also had to complete one or more of the three instruments. Tables 1, 2, and 3 below summarize the Base-Year school and student response data.

Table 1. Base-Year School Participation Data

| Item | Primary Sample Schools | | Participating Schools | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Primary sample: | | | | |
| Participants | 948 | 79.0 | 948 | 88.7 |
| No senior students | 21 | 1.8 | - | - |
| Nonparticipants | 231 | 19.2 | - | - |
| Backup sample: | | | | |
| "Extra" in Base-Year | - | - | 26 | 2.4 |
| Other participants | - | - | 95 | 8.9 |
| Total | 1,200 | 100.0 | 1,069 | 100.0 |

Table 2. Base-Year Student Participation Data

| Sample students | Number of students | | |
|---|---|---|---|
| | Total | Average per school* | Percent |
| Participants | 18,143 | 16.97 | 94.8 |
| Nonparticipants | 1,001 | 0.94 | 5.2 |
| Total | 19,144 | 17.91 | 100.0 |

*For 1,069 participating schools.

Table 3. Base-Year Student Instrument Response Rates

| Instrument | Number completed | Percent of sample students* | Percent of participating students* |
|---|---|---|---|
| SRIF | 18,110 | 94.6 | 99.8 |
| Student Questionnaire | 16,683 | 87.1 | 92.0 |
| Test Book | 15,863 | 82.9 | 87.4 |

*Within 1,069 participating schools.

The unadjusted school weights were calculated as the inverses of the school sample inclusion probabilities; assuming two selections per final stratum:

$W_{uhi} = A_h/2A_{hi}$ = unadjusted school weight for the i-th school in the h-th final stratum

where $A_{hi}$ = size measure for school-hi, and

$A_h = \sum_{i=1}^{M_h} A_{hi}$ = size measure for the h-th stratum.

The adjusted school weight, $W_{ahi}$, were calculated by performing three nonresponse adjustments:

(1) First, all data for 26 "extra" schools were removed from the file so that each final stratum contained data for, at most, two participating sample schools.

(2) Next, the adjusted school weight for participating schools in the final strata containing only one participating school was calculated by doubling the unadjusted weight:

$$W_{ahi} = 2W_{uhi}.$$

(3) Finally, unadjusted school weights for the primary sample schools within final strata with zero participating schools were smeared over similar final strata (usually the other final strata within the same major stratum). If there were k final strata within a particular major stratum and $t < k$ with zero participating schools, the adjustment was as follows:

$$W_{ahi} = \begin{cases} 0 \text{ for } h = 1, 2, \ldots, t;\ i = 1, 2 \text{ and} \\ W_{uhi}\left(\dfrac{1 + \sum_{h=1}^{t}\sum_{i=1}^{2} W_{uhi} A_{hi}}{A_h (k - t)}\right) \text{ for } h = t+1, t+2, \ldots, k \\ \qquad\qquad i = 1, 2 \ . \end{cases}$$

The above formula assumes the k final strata within the major stratum have been reordered so that the first t of them have zero participating schools. These nonresponse adjustments compensate for nonparticipating sample schools by increasing the weights of participating schools.

Two student weights were also computed. The unadjusted student weight for a student in school-hi was defined as

$$SW_{uhi} = W_{uhi} \frac{N_{hi}}{\min (18, N_{hi})}$$

where $N_{hi}$ = number of senior students in school-hi. The adjusted student weight for a student in school-hi was defined as

$$SW_{ahi} = W_{ahi} \frac{N_{hi}}{n_{hi}}$$

where $n_{ih}$ = number of participating students from school-hi. The unadjusted student weights would be appropriate if there had been complete response to the study at all levels—if all selected schools and students had completed the survey instruments. The sum of the adjusted student weights is an estimate of the total number of 1972 senior students in the U.S.

Also, an adjusted student questionnaire weight for a student in school-hi was computed as

$$QW_{ahi} = W_{ahi} \frac{N_{hi}}{qn_{hi}}$$

where $qn_{hi}$ = number of student questionnaires completed in school-hi. The student questionnaire weight described above included an adjustment for nonparticipating schools and was partially adjusted for nonparticipating students within participating schools. There was no nonresponse adjustment, however, for participating schools in which no students in the school completed the document.

Two other facts must be noted concerning the Base-Year weights calculated by the previous contractor. The first involves the twenty-one base-year primary sample schools that were closed, had no senior students, did not exist, or were classed as improper. These schools are indicative of deficiencies in the sampling frame and are referred to in this paper as "legitimate zero" schools. That is, in terms of population estimates, the appropriate contribution to an estimated total from sample schools of this type is zero. A number of these legitimate zero schools were replaced by alternate sample schools.

The second note involves the 26 "extra" schools in the Base-Year sample. Presumably data were collected from replacement schools when it appeared

that primary schools would refuse, but later some of the primary schools cooperated so that data were available for more than two schools within certain final strata. The school and student data from these 26 schools was not included in most of the Base-Year data files produced by the previous contractor.

C. Resurveying Base-Year Nonrespondents

Due to the large school nonresponse in the Base-Year survey, it was decided to attempt to elicit responses from the 231 nonparticipating primary schools and to obtain replacements for the 21 schools that had no seniors. "Resurvey" activity initiated by NCES prior to the First Follow-Up survey involved securing school cooperation and selecting random samples of up to 18 former students (1972 seniors) per school. RTI's basic responsibilities were to:

1. Collect School Questionnaire data from each resurvey school;
2. Collect SRIF data on students selected from each resurvey school, obtain permission to use SRIF data on file for Base-Year students for which permission was lacking, and obtain the same SRIF-use permission from students selected for resurvey;
3. Collect short Base-Year questionnaire data from a planned number of students selected from each resurvey school;
4. Collect short Base-Year questionnaire data from subjects partially surveyed in the Base-Year;
5. Update the Base-Year data base and produce weights to incorporate the additional data.

The information-gathering effort was limited to relatively hard data rather than data on attitudes, general plans, and perceptions likely to change substantially over time.

In the summer of 1973, NCES contacted the sample schools that had not participated in the Base-Year survey. Most of them provided the latest names and addresses for random samples of up to 18 of their 1972 seniors. Former 1972 senior students were also selected from 16 augmentation sample schools (identified in a sample of 200 school districts as eligible public schools not included in the school sampling frame). A total of 4,450 sample students were added to the sample from 257 participating resurvey schools—205 primary

sample, 36 backup sample, and 16 augmentation sample schools. Table 4 shows the number of schools, by type, participating in the Base-Year, resurvey, and First Follow-Up. The 26 schools that were "extra" in their final strata during Base-Year were not included in the First Follow-Up survey. Due to the resurvey work, 96 percent (1,153) of the 1,200 primary sample schools participated in the First Follow-Up.

The basic sample of schools and students for the First Follow-Up survey included a total of 1,300 schools and 23,122 students, as Table 5 indicates. A newsletter was developed and mailed in July 1973 not only to encourage participation but also as a vehicle for updating names and addresses. When mail was returned by the U.S. Postal Service as undeliverable, telephone tracing procedures were used to obtain current addresses where possible.

Prior to the mailout of the First Follow-Up Questionnaires, 102 individuals were deleted from the mailout list for operational reasons (e.g., duplicate names, inaccurate addresses, deceased).

Questionnaires were mailed to the last known addresses of the resulting sample of 23,020 on 23-24 October 1973. This mailout was followed by a planned sequence of reminder postcards, additional questionnare mailings, and reminder mailgrams to nonrespondents. Active mail return efforts continued through December 1973; by early February 1974, the questionnaire return rate by mail was 60.9 percent.

The names and addresses of those sample members who failed to mail back their questionnaires were then turned over to the Bureau of the Census for personal interviews in accordance with a Bureau arrangement with the U.S. Office of Education. This personal interview phase of the First Follow-Up data collection continued until April 7, 1974, at which time the overall response rate had been increased to 92.8 percent—21,350 respondents out of 23,020. If one considers the total number of students in the First Follow-Up sample, the response rate is 92.3 percent or 21,350 out of 23,122.

Table 4. Number of Participating Schools, by Survey

| Item | Base-Year Survey | Resurvey | First Follow-up Survey |
|---|---|---|---|
| Primary sample | 948 | 205 | 1,153 |
| Backup sample | | | |
| "Extra" in Base-Year | 26 | - | - |
| Other | 95 | 36 | 131 |
| Augmentation sample | - | 16 | 16 |
| Total | 1,069 | 257 | 1,300 |

Table 5. Composition of the First Follow-Up Sample

| Item | Schools | Students |
|---|---|---|
| Base-Year | 1,043 | 18,672 |
| Resurvey | 257 | 4,450 |
| Total | 1,300 | 23,122 |

## II. FIRST FOLLOW-UP WEIGHT CALCULATIONS

### A. Unadjusted Student Weights

First, it was necessary to determine exactly which sample schools and students were to be considered "in sample" cases for the 1972 NLS project. The sample design involved 1,200 primary sample schools (two per final stratum) and a planned total of 21,600 students (18 per school). However, the use of backup schools in the Base-Year and First Follow-Up surveys, plus the resurvey work to obtain responses from all of the primary sample schools, resulted in three or four schools being represented in many final strata. After considering the alternatives, it was decided that all sample schools from which any student questionnaires were completed, in either the Base-Year or First Follow-Up survey, would be considered to be in the NLS sample. A total of 1,339 schools were classified as "in the final NLS sample"--1,153 participating primary sample schools, 21 primary sample schools with no 1972 seniors, 131 backup sample schools, 18 "extra" Base-Year schools in which student questionnaires were completed, and 16 augmentation sample schools. It would have been possible to reduce the sample of schools to the 1,200 originally intended, but this alternative was not exercised since considerable Base-Year student data would have been discarded with this alternative.

For each school in the original 600 final strata, the sample inclusion probability, $P_{hi}$, was calculated as

$$P_{hi} = n_h \left(\frac{A_{hi}}{A_h}\right)$$

where $n_h$ = number of schools in the final NLS sample for stratum-h,

$A_{hi}$ = size measure for school-i of stratum-h,

and $A_h$ = sum of size measures for all schools in stratum-h.

The use of $n_h$ in the above equation, where $\sum_{h}^{600} n_h = 1{,}323 = 1{,}339 - 16$, properly accounts for the legitimate zero schools and also allows for final strata where the number of sample schools was not equal to two.

A sample of 200 school districts was canvassed during the Base-Year to identify public schools which were not in the sampling frame. A total of 45 such schools were identified and 23 of them were randomly selected as an augmentation sample.[2/] School selection probabilities, $P_i$, were calculated for each of the 45 schools, as suggested by the NLS sampling contractor.[3/] The 16 participating augmentation schools were grouped into strata (h = 601, 602, ..., 608); sample inclusion probabilities, adjusted for school nonresponse, for these 16 schools were calculated as

$$P_{hi} = \left(\frac{16}{23}\right)\left(\frac{1}{2}\right) P_i \ .$$

The number of students in the sample from each sample school was taken as the number of students who were offered a chance to be in the sample and who also were eligible. This included all sample eligibles, both respondents and nonrespondents, but excluded selected students who were not eligible for the study--such as dropouts, early graduates, and adult education students.

There were 23,451 sample students, of whom 16,683 completed a Base-Year Student Questionnaire and 21,350 completed a First Follow-Up Questionnaire.

The unadjusted student weight, $W_{uhij}$, for each of the 23,451 selected students was calculated as

$$W_{uhij} = \frac{1}{P_{hi}} \cdot \frac{N_{hi}}{n_{hi}} \ ,$$

where $N_{hi}$ = number of senior students in school-hi

and $n_{hi}$ = number of sampled students in school-hi.

The sum of the unadjusted student weights is an estimate of the total number of 1972 high school seniors in the population; if all of the selected students had completed the survey instruments, these weights would be appropriate for the analyses of student data.

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2/ The Base-Year Survey of the National Longitudinal Study of the High School Class of 1972--Final Report, Educational Testing Service, Princeton, New Jersey, pp. 4-9, June 1973.

3/ Sample Design for the Selection of a Sample of Schools with Twelfth-Graders for a Longitudinal Study, ERIC.

B. Nonresponse Adjustment Methodology

How to handle the problem of nonresponse when analyzing survey data is an open question. In general, the mean values of most variables will be different for respondents and nonrespondents. If the differences are large or if the survey response rates are low, then appropriate nonresponse adjustments or data imputations should be used in attempting to reduce the bias due to nonresponse. There are no methods of imputing for nonresponse that are known to be unbiased or even consistent.[4/] Various methods of imputing or attempting to correct for both item nonresponse and for total questionnaire nonresponse are summarized in a paper by Chapman.[5/]

After considering various methods of adjusting for questionnaire nonresponse, a weighting class method was selected. This method involved partitioning the entire sample of NLS respondents and nonrespondents into weighting classes, which are (hopefully) homogeneous groups of students with respect to the survey variables. Differential response rates for students in different weighting classes are also reflected in the adjustment. In order for the weighting class adjustment procedure to be most effective, the classifier variable values used to construct classes must be available for a very large proportion of respondents and nonrespondents alike.

Once the weighting classes have been defined, the weight adjustment procedure is effected simply by calculating each sample student's adjusted weight as

$$W_{hij(k)} = W_{uhij}\, L_{hij}\, \frac{\sum_{hij} K_{hij}\, W_{uhij}}{\sum_{hij} K_{hij}\, L_{hij}\, W_{unij}}$$

where

$$K_{hij} = \begin{cases} 1 & \text{if student-hij was assigned to weighting class-k, or} \\ 0 & \text{otherwise,} \end{cases}$$

$$L_{hij} = \begin{cases} 1 & \text{if student-hij completed the survey instrument, or} \\ 0 & \text{otherwise, and} \end{cases}$$

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[4/] U.S. Bureau of the Census, The Current Population Survey - A Report on Methodology, Technical Paper No. 7, U.S. Government Printing Office, Washington, D.C., 1963.

5/David W. Chapman, A Survey of Nonresponse Inputation Procedures, presented at the Southern Region Education Board Summer Research Conference on Statistics in Mountain Lake, Va., June 11-15, 1973.

$W_{vhij}$ = The unadjusted student weight for student-j of school-i of stratum-h, as described in section II.A.

Thus, the unadjusted weights for all respondent students in a weighting class are simply multiplied by the ratio of the sum of weights for the weighting class to the sum of the respondents' weights for the weighting class. The adjusted weights for all nonrespondents are set equal to zero. Actually, six different sets of adjusted student weights were calculated; each set is appropriate for analyses involving a different NLS Base-Year, First Follow-Up, or transitional data set.

C. Assembling Classifier Variable Data

Five classifier variables were chosen for use in defining weighting classes. The variables selected were those that were expected to be most effective, of the variables available, in defining weighting classes that varied with respect to response rates and survey estimates.

The classifier variables used to define weighting classes were:

Race--white or nonwhite;

Sex--male or female;

High school curriculum--general, academic or vocational-technical;

High school grades--B or better, or C or below;

Parents' education--less than high school graduate, high school graduate, some beyond high school, or college graduate.

Since there were two or more sources for each of the classifier variables, the following source priorities were used:

Race

1. Base-Year Student Questionnaire (Q 84)
2. First Follow-Up Form B (Q 95)

Sex

1. Base-Year Student Questionnaire (page 1)
2. First Follow-Up Questionnaire
3. Inferred from name on student rosters

High School Curriculum

1. SRIF (Q 7)
2. Base-Year Student Questionnaire (Q 2)
3. First Follow-Up Questionnaire (Q 86)

High School Grades

1. SRIF (Q 1)
2. Base-Year Student Questionnaire (Q 5)
3. First Follow-Up Questionnaire (Q 87)

Parents' Education

1. Base-Year Student Questionnaire (Q 90A)
2. First Follow-Up Questionnaire (Q 78A)
3. Base-Year Student Questionnaire (Q 90B)
4. First Follow-Up Questionnaire (Q 78B)

For example, in determining the value of the third classifier variable for a student, question 7 of the SRIF was assigned the first priority. If the student did not complete an SRIF or left question 7 blank, then the information would be obtained from question 2 of the Base-Year Questionnaire, if available there, or finally from question 86 of the First Follow-Up questionnaire. Note that the fifth classifier variable, parents' education, is defined as father's education if available, or mother's education, otherwise.

Table 6 shows the number of students for whom a value was ascertained for each of the five classifier variables. The race variable had the highest number of missing values, followed by curriculum, parents' education, grades, and sex. Values of all five classifier variables were determined for over 84 percent of the 23,451 sample students and at least three of the classifier variable values were determined for 95 percent of the sample students (Table 7). Because of the missing classifier data, an "unavailable" category had to be included for each of the five classifier variables. It is hoped that the number of missing values may be reduced in the future, since some of the questions may be asked in subsequent surveys.

D. Forming the Weighting Classes

The next step was to cross-classify the 23,451 sample students by the values of the five classifier variables. Since an "unavailable" category had been added to each classifier variable, a total of 540 cells (3 x 3 x 4 x 3 x 5) was produced, with counts of sample students and responding students for each cell. (Several respondent counts were made since several different adjusted weights were to be calculated--see next section).

An arbitrary rule that each weighting class must contain at least 20 respondents was used to avoid any very large weight adjustments. A set of

Table 6. Availability of Classifier Variable Values, by Variable

| Variable | Value missing | Value determined | Percent determined |
|---|---|---|---|
| Race | 2,606 | 20,845 | 88.9 |
| Sex | 169 | 23,282 | 99.3 |
| High school curriculum | 2,376 | 21,075 | 89.9 |
| High school grades | 613 | 22,838 | 97.4 |
| Parents' education | 1,966 | 21,485 | 91.6 |

Table 7. Availability of Classifier Variable Values, by Number of Variables Determined

| Number of variables determined | Number of of students | Percent of sample students |
|---|---|---|
| 5 | 19,783 | 84.3 |
| 4 | 1,210 | 5.2 |
| 3 | 1,281 | 5.5 |
| 2 | 819 | 3.5 |
| 1 | 289 | 1.2 |
| 0 | 69 | 0.3 |
| Total | 23,451 | 100.0 |

collapsing rules had been predetermined for use in combining "similar" cells which contained fewer than 20 respondents. Cells were combined in the following order until each of the combined cells contained at least 20 respondents:

1. Add "unavailables" to largest category of each variable
   a. Race unavailable to white
   b. Sex unavailable to female
   c. Curriculum unavailable to academic
   d. Grades unavailable to C or lower
   e. Father's education unavailable to H.S. graduate
2. Change curriculum to bivariate
   a. Add "general" to "vocational-technical"
3. Change father's education to bivariate
   a. Add "less than H.S." to "H.S. graduate"
   b. Add "some beyond H.S." to "H.S. graduate"
4. Eliminate grades
5. Eliminate curriculum
   a. Add "academic" to "general or vocational-technical"
6. Eliminate father's education
   a. Add "less then H.S. or H.S. graduate" to "some beyond H.S. or college graduate"
7. Eliminate sex
8. Eliminate race

It turned out that virtually all of the cells involving one or more "unavailable" classifier varaibles had fewer than 20 responding students--because of this, the combinations specified in step 1 above were done for all of those cells. Step 2 was used seven times and step 3 was used two times. The remaining steps, 4 through 8, were never used.

A total of 87 weighting classes were formed using the procedures described in this section. Each weighting class contained 20 or more respondents for each of the data sets described in the next section.

## E. Calculating Adjusted Student Weights

Once the weighting classes had been determined, the adjusted student weights were computed using the equation given in section II.B above. Since several different data sets could be derived from the NLS Base-Year and First Follow-Up data base, a total of six different sets of adjusted weights were

computed.

Table 8 lists the data set and variables appropriate to each set of weights--W1, W2, W3, W4, W5, and W6. Table 9 shows the number of sample students in each of five response groups, determined by which questionnaires the students completed. From Table 9, one can see that 16,683 (response groups I and II) students completed the Base-Year Student Questionnaire. However, limited Base-Year data were also collected during the First Follow-Up survey from some additional sample students who had not completed the Base-Year Student Questionnaires. Thus, data for Base-Year items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95 (included on Form 3, First Follow-Up Questionnaire were obtained from 21,222 students (response groups I, II, and IV). Two sets of nonresponse adjusted student weights were computed for analyses of Base-Year data. Analyses of the 14 Base-Year items listed above should use the W2 weights. For all other Base-Year questionnaire items, the W1 weights should be used.

There was a total of 21,350 respondents to the First Follow-Up Questionnaire (response groups I, III, and IV). The W3 weights are appropriate for analyses of Follow-Up Questionnaire items.

Analyses of change, or transition, variables derived using both Base-Year and First Follow-Up items should be carried out using either the W4 or W5 weights. If the change variables are defined using Base-Year items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95, then the W5 weights are appropriate. For analyses of change variables based on other Base-Year items in conjunction with First Follow-Up items, the W4 weights should be used. From Table 9, one can see that matched Base-Year and First Follow-Up data are available for 15,635 students (response group I) for most variables and for 20,174 students (response groups I and IV) for the 14 Base-Year variables listed above.

The last set of weights (W6) is appropriate for analyses involving every student who completed a Base-Year Student Questionnaire and/or a First Follow-Up Questionnaire (response groups I, II, III, and IV). There are 22,398 students who fall into this category. The remaining 1,053 sample members (response group V) did not complete either questionnaire.

For each weight set, the adjusted weights for nonrespondents are zero and the sum of the respondents' adjusted weights equals the sum of the

Table 8. Appropriate Weights for Various Data Sets and Variables

| Weight set | Appropriate data set | Appropriate variables |
|---|---|---|
| W1 | Respondents to Base-Year Student Questionnaire | Variables defined from Base-Year Student Questionnaire items |
| W2 | Respondents to either the Base-Year Questionnaire or the First Follow-Up Questionnaire (Form B) | Variables defined from Base-Year Student Questionnaire items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95 |
| W3 | Respondents for First Follow-Up Questionnaire | Variables defined from First Follow-Up Questionnaire items |
| W4 | Respondents to the Base-Year Student Questionnaire and the First Follow-Up Questionnaire | Change variables defined using items from both the Base-Year Student Questionnaire and the First Follow-Up Questionnaire |
| W5 | Respondents to either<br>1) the Base-Year Student Questionnaire and the First Follow-Up Questionnaire (Form A), or<br>2) the First Follow-Up Questionnaire (Form B) | Change variables defined using Base-Year Student Questionnaire items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95 and First Follow-Up Questionnaire items |
| W6 | Respondents to either the Base-Year Student Questionnaire or the First Follow-Up Questionnaire | Variables with values defined from data available for each student in the release file |

Table 9. Response Groups Defined by Base-Year and First Follow-Up Responses

| Response group | Completed Base-Year Student Questionnaire | Completed First Follow-Up Form A | Completed First Follow-Up Form B | Number of students |
|---|---|---|---|---|
| I | yes | yes | no | 15,635 |
| II | yes | no | no | 1,048 |
| III | no | yes | no | 1,176 |
| IV | no | no | yes | 4,539 |
| V | no | no | no | 1,053 |

unadjusted weights for the entire sample. The user should choose the set of adjusted weights which is appropriate to the data set and variables to be analyzed. The weights are adjusted only for questionnaire nonresponse and not for item nonresponse. The same methods could be used to obtain another set of weights, adjusted for both questionnaire nonresponse and item nonresponse, for any questionnaire item or variable. In most cases, the gains from such an adjustment would not be expected to outweigh the additional cost.

The weight adjustment formulae are shown below. First, define

$$K_{hij} = \begin{cases} 1 \text{ if student-hij belongs to weighting class-k, or} \\ 0 \text{ otherwise;} \end{cases}$$

$$L_{hij} = \begin{cases} 1 \text{ if student-hij completed the questionnaire(s) required to be included in data set-}\ell\text{, or} \\ 0 \text{ otherwise.} \end{cases}$$

Recalling that the unadjusted student weights, $W_{uhij}$, described earlier, the nonresponse adjusted weights, $W_{hij(k)\ell}$, for data set-$\ell$ ($\ell = 1, 2, \ldots, 6$) were computed as

$$W_{hij(k)\ell} = W_{uhij} L_{hij} \frac{\sum_{hij} K_{hij} W_{uhij}}{\sum_{hij} K_{hij} L_{hij} W_{uhij}},$$

for student-j who was selected from school-hi and classified in weighting class-k ($k = 1, 2, \ldots, 87$).

Tables 10 through 15 show the nonresponse adjustment factors, for each weighting class, for each of the six sets of adjusted student weights. The tables also show the total number of students, total number of responding students, sum of all unadjusted weights, and sum of the respondent unadjusted weights. The largest adjustment factor used for any of the weighting classes was 2.68, and very few adjustment factors were 2.00 or larger. Of course, the largest factors were used for weight set W1, where the response rates were the lowest.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 219 | 169 | 3622118 | 1818239 | 1,99371 | 3622118 |
| 2 | 230 | 153 | 2677487 | 1340481 | 1,99478 | 2677487 |
| 3 | 121 | 88 | 1753155 | 1248254 | 1,40419 | 1753155 |
| 4 | 146 | 107 | 1981054 | 1417585 | 1,39724 | 1981054 |
| 5 | 776 | 581 | 10410040 | 7758424 | 1,34182 | 10410040 |
| 6 | 907 | 682 | 12200550 | 9124968 | 1,33705 | 12200550 |
| 7 | 385 | 287 | 8949742 | 8113483 | 1,20320 | 8949742 |
| 8 | 277 | 226 | 8004601 | 5539481 | 1,19952 | 8004601 |
| 9 | 412 | 298 | 5530898 | 3850488 | 1,38434 | 5530898 |
| 10 | 745 | 494 | 10023794 | 6881277 | 1,87386 | 10023794 |
| 11 | 459 | 346 | 6485071 | 5119868 | 1,26668 | 6485071 |
| 12 | 726 | 553 | 10117133 | 7905748 | 1,28516 | 10117133 |
| 13 | 465 | 281 | 6386353 | 4071439 | 1,56842 | 6386353 |
| 14 | 1180 | 884 | 15892526 | 7333934 | 2,16698 | 15892526 |
| 15 | 427 | 297 | 6223107 | 4521553 | 1,37652 | 6223107 |
| 16 | 447 | 388 | 6795952 | 5418688 | 1,25410 | 6795952 |
| 17 | 189 | 98 | 2046983 | 1258242 | 1,62654 | 2046983 |
| 18 | 127 | 92 | 1816377 | 1286921 | 1,45869 | 1816377 |
| 19 | 47 | 34 | 631131 | 439598 | 1,43570 | 631131 |
| 20 | 489 | 423 | 6612618 | 5741088 | 1,15172 | 6612618 |
| 21 | 449 | 344 | 6567849 | 4931597 | 1,31962 | 6567849 |
| 22 | 140 | 120 | 2050278 | 1881735 | 1,08957 | 2050278 |
| 23 | 85 | 74 | 1262515 | 1075371 | 1,17403 | 1262515 |
| 24 | 379 | 257 | 8680858 | 3203686 | 1,80123 | 8680858 |
| 25 | 421 | 314 | 5388035 | 4015335 | 1,34184 | 5388035 |
| 26 | 193 | 152 | 2629813 | 2004564 | 1,28628 | 2629813 |
| 27 | 208 | 150 | 2754881 | 2184084 | 1,26116 | 2754881 |
| 28 | 567 | 419 | 7199256 | 5469687 | 1,31621 | 7199256 |
| 29 | 566 | 378 | 7886978 | 5356441 | 1,47182 | 7886978 |
| 30 | 216 | 166 | 3083551 | 2398895 | 1,28540 | 3083551 |
| 31 | 173 | 149 | 2453012 | 2161431 | 1,13490 | 2453012 |
| 32 | 532 | 371 | 7144870 | 5194791 | 1,37916 | 7144870 |
| 33 | 885 | 559 | 11977869 | 8064535 | 1,48525 | 11977869 |
| 34 | 590 | 434 | 8630868 | 6513395 | 1,32506 | 8630868 |
| 35 | 771 | 604 | 11145945 | 8963301 | 1,25109 | 11145945 |
| 36 | 310 | 162 | 3910928 | 2248356 | 1,73906 | 3910928 |
| 37 | 753 | 228 | 9397118 | 3512321 | 2,67547 | 9397118 |
| 38 | 220 | 184 | 3284703 | 2597681 | 1,26350 | 3284703 |
| 39 | 262 | 193 | 3911751 | 2913797 | 1,34249 | 3911751 |
| 40 | 386 | 309 | 5072502 | 4046737 | 1,24860 | 5072502 |
| 41 | 355 | 283 | 5080384 | 3999480 | 1,27038 | 5080384 |
| 42 | 150 | 123 | 2040681 | 1710428 | 1,19308 | 2040681 |
| 43 | 62 | 49 | 919470 | 756190 | 1,21591 | 919470 |
| 44 | 521 | 432 | 7432896 | 5913035 | 1,25697 | 7432896 |
| 45 | 426 | 317 | 6042193 | 4636283 | 1,30325 | 6042193 |
| 46 | 175 | 151 | 2724488 | 2369197 | 1,14996 | 2724488 |
| 47 | 92 | 79 | 1421888 | 1277705 | 1,11284 | 1421888 |
| 48 | 104 | 74 | 928037 | 669818 | 1,38535 | 928037 |
| 49 | 60 | 32 | 525869 | 281659 | 1,86695 | 525869 |
| 50 | 43 | 38 | 478842 | 407219 | 1,17588 | 478842 |
| 51 | 388 | 279 | 3849831 | 2798343 | 1,37645 | 3849831 |
| 52 | 200 | 158 | 2003642 | 1574331 | 1,27269 | 2003642 |
| 53 | 71 | 60 | 775053 | 670505 | 1,15592 | 775053 |
| 54 | 60 | 51 | 660203 | 572478 | 1,15328 | 660203 |
| 55 | 131 | 98 | 1263188 | 971143 | 1,30072 | 1263188 |
| 56 | 96 | 67 | 968318 | 639838 | 1,51359 | 968318 |
| 57 | 47 | 40 | 506335 | 463005 | 1,09358 | 506335 |
| 58 | 50 | 33 | 628897 | 424308 | 1,48253 | 628897 |
| 59 | 180 | 153 | 1849371 | 1523399 | 1,21398 | 1849371 |
| 60 | 152 | 105 | 1574888 | 1181833 | 1,33223 | 1574888 |
| 61 | 56 | 48 | 572676 | 509052 | 1,12300 | 572676 |
| 62 | 27 | 22 | 354773 | 300287 | 1,18145 | 354773 |
| 63 | 62 | 47 | 549119 | 418039 | 1,31356 | 549119 |
| 64 | 43 | 31 | 392062 | 315815 | 1,24143 | 392062 |
| 65 | 288 | 232 | 2911181 | 2380053 | 1,24385 | 2911181 |
| 66 | 161 | 128 | 1594402 | 1351641 | 1,17960 | 1594402 |
| 67 | 56 | 51 | 657349 | 614535 | 1,06975 | 657349 |
| 68 | 201 | 141 | 1739247 | 1278478 | 1,35998 | 1739247 |
| 69 | 73 | 45 | 681698 | 428477 | 1,59134 | 681698 |
| 70 | 78 | 54 | 782696 | 571597 | 1,36933 | 782696 |
| 71 | 357 | 256 | 3624348 | 2463005 | 1,47148 | 3624348 |
| 72 | 160 | 117 | 1787153 | 1381326 | 1,29379 | 1787153 |
| 73 | 55 | 47 | 598113 | 497226 | 1,20290 | 598113 |
| 74 | 46 | 38 | 537645 | 436147 | 1,23271 | 537645 |
| 75 | 201 | 148 | 1903908 | 1284978 | 1,48227 | 1903908 |
| 76 | 138 | 98 | 1335953 | 829754 | 1,61006 | 1335953 |
| 77 | 86 | 62 | 869452 | 698486 | 1,24467 | 869452 |
| 78 | 63 | 58 | 693828 | 609878 | 1,13748 | 693828 |
| 79 | 155 | 128 | 1507503 | 1287351 | 1,24960 | 1507503 |
| 80 | 105 | 78 | 1068748 | 738279 | 1,44762 | 1068748 |
| 81 | 57 | 41 | 655876 | 440168 | 1,49008 | 655876 |
| 82 | 30 | 26 | 386886 | 308837 | 1,12547 | 386886 |
| 83 | 178 | 132 | 1737687 | 1221837 | 1,42249 | 1737687 |
| 84 | 89 | 72 | 955551 | 681108 | 1,25601 | 955551 |
| 85 | 336 | 278 | 3438209 | 2794518 | 1,23034 | 3438209 |
| 86 | 148 | 118 | 1640097 | 1349958 | 1,22775 | 1640097 |
| 87 | 49 | 48 | 517876 | 465795 | 1,11105 | 517876 |
| 88 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| TOTAL | 23451 | 18483 | 304359876 | 221557195 | 0,0 | 304359876 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights

# Table 11. Nonresponse Adjustments for Weight Set W2

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 1 | 219 | 219 | 2e22118 | 2e22118 | 1,00000 | 2e22118 |
| 2 | 239 | 217 | 2e77467 | 2546295 | 1,04269 | 2577467 |
| 3 | 123 | 123 | 1753155 | 1753155 | 1,00000 | 1753155 |
| 4 | 144 | 144 | 1981654 | 1981654 | 1,00000 | 1981654 |
| 5 | 776 | 776 | 10410448 | 10410448 | 1,00000 | 10410448 |
| 6 | 907 | 907 | 12200550 | 11580359 | 1,05355 | 12200550 |
| 7 | 345 | 345 | 4949792 | 4949792 | 1,00000 | 4949792 |
| 8 | 277 | 277 | 4004601 | 4004601 | 1,00000 | 4004601 |
| 9 | 812 | 383 | 5330898 | 4852973 | 1,09822 | 5330898 |
| 10 | 745 | 415 | 10023798 | 8580137 | 1,16825 | 10023798 |
| 11 | 859 | 823 | 6485071 | 6107456 | 1,06179 | 6485071 |
| 12 | 724 | 678 | 10117133 | 9515049 | 1,06346 | 10117133 |
| 13 | 865 | 348 | 6386353 | 5186128 | 1,23139 | 6386353 |
| 14 | 1180 | 641 | 15892526 | 9777553 | 1,62541 | 15892526 |
| 15 | 427 | 383 | 6223107 | 5399381 | 1,15254 | 6223107 |
| 16 | 487 | 398 | 6795952 | 6108875 | 1,11247 | 6795952 |
| 17 | 149 | 149 | 2046983 | 2046983 | 1,00000 | 2046983 |
| 18 | 127 | 118 | 1816377 | 1711188 | 1,06147 | 1816377 |
| 19 | 47 | 47 | 631131 | 631131 | 1,00000 | 631131 |
| 20 | 889 | 889 | 6612610 | 6612610 | 1,00000 | 6612610 |
| 21 | 849 | 828 | 6507849 | 6282699 | 1,04247 | 6507849 |
| 22 | 148 | 148 | 2050278 | 2050278 | 1,00000 | 2050278 |
| 23 | 85 | 85 | 1262515 | 1262515 | 1,00000 | 1262515 |
| 24 | 379 | 379 | 4880458 | 4880458 | 1,00000 | 4880458 |
| 25 | 821 | 818 | 5388035 | 5344378 | 1,01575 | 5388035 |
| 26 | 193 | 193 | 2629813 | 2629813 | 1,00000 | 2629813 |
| 27 | 208 | 208 | 2754881 | 2754881 | 1,00000 | 2754881 |
| 28 | 567 | 567 | 7199256 | 7199256 | 1,00000 | 7199256 |
| 29 | 566 | 518 | 7886978 | 7380047 | 1,07159 | 7886978 |
| 30 | 214 | 214 | 3083551 | 3083551 | 1,00000 | 3083551 |
| 31 | 173 | 173 | 2453012 | 2453012 | 1,00000 | 2453012 |
| 32 | 532 | 451 | 7164070 | 6359455 | 1,12655 | 7164070 |
| 33 | 885 | 695 | 11977869 | 9931443 | 1,20601 | 11977869 |
| 34 | 598 | 543 | 8630668 | 8005310 | 1,07812 | 8630668 |
| 35 | 771 | 711 | 11145945 | 10351925 | 1,07670 | 11145945 |
| 36 | 310 | 208 | 3910928 | 2707786 | 1,44434 | 3910928 |
| 37 | 753 | 324 | 9397118 | 8788493 | 1,06948 | 9397118 |
| 38 | 220 | 185 | 3284703 | 2855885 | 1,15032 | 3284703 |
| 39 | 262 | 228 | 3911751 | 3351153 | 1,16729 | 3911751 |
| 40 | 386 | 386 | 5072502 | 5072502 | 1,00000 | 5072502 |
| 41 | 355 | 348 | 5080384 | 4890179 | 1,03899 | 5080384 |
| 42 | 150 | 150 | 2040681 | 2040681 | 1,00000 | 2040681 |
| 43 | 62 | 62 | 919870 | 919870 | 1,00000 | 919870 |
| 44 | 521 | 521 | 7432896 | 7432896 | 1,00000 | 7432896 |
| 45 | 426 | 398 | 6042193 | 5701173 | 1,05982 | 6042193 |
| 46 | 175 | 175 | 2724488 | 2724488 | 1,00000 | 2724488 |
| 47 | 92 | 92 | 1421868 | 1421868 | 1,00000 | 1421868 |
| 48 | 104 | 104 | 928037 | 928037 | 1,00000 | 928037 |
| 49 | 60 | 60 | 525869 | 525869 | 1,00000 | 525869 |
| 50 | 43 | 43 | 478842 | 478842 | 1,00000 | 478842 |
| 51 | 388 | 388 | 3849031 | 3849031 | 1,00000 | 3849031 |
| 52 | 200 | 200 | 2003642 | 2003642 | 1,00000 | 2003642 |
| 53 | 71 | 71 | 775053 | 775053 | 1,00000 | 775053 |
| 54 | 60 | 60 | 660203 | 660203 | 1,00000 | 660203 |
| 55 | 131 | 131 | 1263188 | 1263188 | 1,00000 | 1263188 |
| 56 | 96 | 96 | 968318 | 968318 | 1,00000 | 968318 |
| 57 | 47 | 47 | 506335 | 506335 | 1,00000 | 506335 |
| 58 | 50 | 50 | 628897 | 628897 | 1,00000 | 628897 |
| 59 | 180 | 180 | 1849371 | 1849371 | 1,00000 | 1849371 |
| 60 | 152 | 152 | 1574888 | 1574888 | 1,00000 | 1574888 |
| 61 | 56 | 54 | 572676 | 572676 | 1,00000 | 572676 |
| 62 | 27 | 27 | 354773 | 354773 | 1,00000 | 354773 |
| 63 | 62 | 62 | 549119 | 549119 | 1,00000 | 549119 |
| 64 | 43 | 43 | 392062 | 392062 | 1,00000 | 392062 |
| 65 | 288 | 288 | 2911181 | 2911181 | 1,00000 | 2911181 |
| 66 | 161 | 161 | 1594802 | 1594802 | 1,00000 | 1594802 |
| 67 | 56 | 56 | 657399 | 657399 | 1,00000 | 657399 |
| 68 | 201 | 201 | 1739247 | 1739247 | 1,00000 | 1739247 |
| 69 | 73 | 73 | 681698 | 681698 | 1,00000 | 681698 |
| 70 | 78 | 78 | 782696 | 782696 | 1,00000 | 782696 |
| 71 | 357 | 357 | 3624388 | 3624388 | 1,00000 | 3624388 |
| 72 | 160 | 160 | 1787153 | 1787153 | 1,00000 | 1787153 |
| 73 | 55 | 55 | 598113 | 598113 | 1,00000 | 598113 |
| 74 | 46 | 46 | 537645 | 537645 | 1,00000 | 537645 |
| 75 | 201 | 201 | 1963908 | 1963908 | 1,00000 | 1963908 |
| 76 | 130 | 130 | 1335953 | 1335953 | 1,00000 | 1335953 |
| 77 | 86 | 86 | 869852 | 869852 | 1,00000 | 869852 |
| 78 | 63 | 63 | 693828 | 693828 | 1,00000 | 693828 |
| 79 | 155 | 155 | 1507503 | 1507503 | 1,00000 | 1507503 |
| 80 | 105 | 105 | 1068748 | 1068748 | 1,00000 | 1068748 |
| 81 | 57 | 57 | 655876 | 655876 | 1,00000 | 655876 |
| 82 | 30 | 30 | 386886 | 386886 | 1,00000 | 386886 |
| 83 | 178 | 178 | 1737687 | 1737687 | 1,00000 | 1737687 |
| 84 | 89 | 89 | 855551 | 855551 | 1,00000 | 855551 |
| 85 | 336 | 336 | 3438209 | 3438209 | 1,00000 | 3438209 |
| 86 | 168 | 168 | 1640897 | 1640897 | 1,00000 | 1640897 |
| 87 | 49 | 49 | 517876 | 517876 | 1,00000 | 517876 |
| 88 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0,0 | 0 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights

# Table 12. Nonresponse Adjustments for Weight Set W3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | 219 | 204 | 2022110 | 2459385 | 1,00000 | 2022110 |
| 2 | 230 | 205 | 2077007 | 2451601 | 1,00231 | 2077007 |
| 3 | 123 | 119 | 1753155 | 1708525 | 1,02732 | 1753155 |
| 4 | 146 | 140 | 1981059 | 1933530 | 1,02458 | 1981059 |
| 5 | 776 | 731 | 10013040 | 9891258 | 1,00249 | 10013040 |
| 6 | 907 | 788 | 12200550 | 10674900 | 1,14242 | 12200550 |
| 7 | 345 | 329 | 4949792 | 4712251 | 1,05041 | 4949792 |
| 8 | 277 | 259 | 4004601 | 3746730 | 1,06882 | 4004601 |
| 9 | 412 | 397 | 5330998 | 5154951 | 1,03415 | 5330998 |
| 10 | 745 | 651 | 10023798 | 9039037 | 1,10757 | 10023798 |
| 11 | 459 | 447 | 6885871 | 6339815 | 1,02298 | 6885871 |
| 12 | 726 | 706 | 10117133 | 9310978 | 1,03367 | 10117133 |
| 13 | 465 | 447 | 6340353 | 6180491 | 1,03327 | 6340353 |
| 14 | 1100 | 757 | 15892526 | 10990865 | 1,04503 | 15892526 |
| 15 | 427 | 403 | 6223107 | 5822188 | 1,06882 | 6223107 |
| 16 | 447 | 433 | 6795952 | 6574452 | 1,03366 | 6795952 |
| 17 | 149 | 148 | 2046983 | 2041138 | 1,00286 | 2046983 |
| 18 | 127 | 118 | 1816377 | 1667118 | 1,08953 | 1816377 |
| 19 | 47 | 45 | 631131 | 615133 | 1,02601 | 631131 |
| 20 | 489 | 458 | 6812410 | 6208169 | 1,06515 | 6812610 |
| 21 | 449 | 398 | 6507849 | 5817725 | 1,11579 | 6507849 |
| 22 | 146 | 135 | 2050278 | 1974978 | 1,03813 | 2050278 |
| 23 | 85 | 82 | 1262515 | 1237850 | 1,01993 | 1262515 |
| 24 | 379 | 373 | 4880458 | 4597127 | 1,01813 | 4880458 |
| 25 | 421 | 397 | 5588035 | 5112413 | 1,05391 | 5588035 |
| 26 | 193 | 189 | 2629813 | 2594501 | 1,01354 | 2629813 |
| 27 | 208 | 203 | 2754881 | 2699100 | 1,02052 | 2754881 |
| 28 | 567 | 539 | 7199256 | 6656715 | 1,04965 | 7199256 |
| 29 | 566 | 488 | 7886978 | 6978056 | 1,13011 | 7886978 |
| 30 | 216 | 202 | 3083551 | 2844428 | 1,08407 | 3083551 |
| 31 | 173 | 162 | 2453012 | 2268908 | 1,07169 | 2453012 |
| 32 | 532 | 519 | 7164870 | 7087250 | 1,01663 | 7164870 |
| 33 | 885 | 783 | 11977889 | 10639537 | 1,12579 | 11977889 |
| 34 | 590 | 579 | 8630668 | 8512282 | 1,01391 | 8630668 |
| 35 | 771 | 752 | 11145945 | 10826238 | 1,02953 | 11145945 |
| 36 | 310 | 301 | 3910928 | 3802803 | 1,02852 | 3910928 |
| 37 | 753 | 636 | 9397118 | 8083153 | 1,16537 | 9397118 |
| 38 | 220 | 219 | 3284703 | 3148439 | 1,03663 | 3284703 |
| 39 | 262 | 257 | 3911751 | 3808473 | 1,01696 | 3911751 |
| 40 | 386 | 378 | 5072502 | 4904957 | 1,02579 | 5072502 |
| 41 | 355 | 327 | 5080368 | 4725863 | 1,07547 | 5080368 |
| 42 | 150 | 143 | 2040681 | 1952856 | 1,04497 | 2040681 |
| 43 | 62 | 62 | 919878 | 919878 | 1,00000 | 919878 |
| 44 | 521 | 499 | 7432896 | 7150751 | 1,03948 | 7432896 |
| 45 | 426 | 368 | 6042193 | 5252365 | 1,15038 | 6042193 |
| 46 | 175 | 166 | 2720888 | 2579247 | 1,05631 | 2720888 |
| 47 | 92 | 84 | 1421888 | 1370443 | 1,03818 | 1421888 |
| 48 | 108 | 101 | 928037 | 894794 | 1,03258 | 928037 |
| 49 | 60 | 58 | 525869 | 493422 | 1,06852 | 525869 |
| 50 | 43 | 40 | 478842 | 453292 | 1,05637 | 478842 |
| 51 | 388 | 367 | 3849031 | 3672451 | 1,04230 | 3849031 |
| 52 | 200 | 176 | 2003642 | 1755796 | 1,14116 | 2003642 |
| 53 | 71 | 68 | 775053 | 719482 | 1,08898 | 775053 |
| 54 | 60 | 51 | 660203 | 570882 | 1,15727 | 660203 |
| 55 | 131 | 125 | 1263108 | 1220546 | 1,03490 | 1263108 |
| 56 | 96 | 88 | 968318 | 905395 | 1,06950 | 968318 |
| 57 | 47 | 46 | 506335 | 496491 | 1,01982 | 506335 |
| 58 | 50 | 50 | 628897 | 628897 | 1,00000 | 628897 |
| 59 | 180 | 169 | 1849371 | 1752788 | 1,05510 | 1849371 |
| 60 | 152 | 137 | 1574988 | 1455526 | 1,08249 | 1574988 |
| 61 | 54 | 47 | 572676 | 476853 | 1,20297 | 572676 |
| 62 | 27 | 25 | 354773 | 311973 | 1,13719 | 354773 |
| 63 | 62 | 62 | 509119 | 509119 | 1,00000 | 509119 |
| 64 | 43 | 37 | 392062 | 316435 | 1,23888 | 392062 |
| 65 | 288 | 268 | 2911181 | 2694853 | 1,08060 | 2911181 |
| 66 | 161 | 148 | 1594402 | 1486553 | 1,07291 | 1594402 |
| 67 | 56 | 56 | 657399 | 595616 | 1,10373 | 657399 |
| 68 | 201 | 194 | 1739247 | 1669481 | 1,04206 | 1739247 |
| 69 | 73 | 71 | 881698 | 848532 | 1,03909 | 881698 |
| 70 | 78 | 78 | 782696 | 781808 | 1,00958 | 782696 |
| 71 | 357 | 342 | 3624348 | 3472894 | 1,04361 | 3624348 |
| 72 | 160 | 152 | 1787153 | 1699855 | 1,05134 | 1787153 |
| 73 | 55 | 49 | 598113 | 581298 | 1,10497 | 598113 |
| 74 | 46 | 41 | 537645 | 499208 | 1,07708 | 537645 |
| 75 | 201 | 196 | 1903908 | 1877269 | 1,01419 | 1903908 |
| 76 | 130 | 123 | 1335953 | 1282454 | 1,04139 | 1335953 |
| 77 | 86 | 84 | 869852 | 850919 | 1,01226 | 869852 |
| 78 | 63 | 59 | 693828 | 640447 | 1,08334 | 693828 |
| 79 | 155 | 150 | 1507503 | 1463299 | 1,03021 | 1507503 |
| 80 | 105 | 95 | 1068748 | 970853 | 1,09273 | 1068748 |
| 81 | 57 | 53 | 855876 | 802188 | 1,05920 | 855876 |
| 82 | 38 | 28 | 386886 | 311898 | 1,11138 | 386886 |
| 83 | 178 | 169 | 1737687 | 1670823 | 1,03519 | 1737687 |
| 84 | 89 | 83 | 855551 | 811177 | 1,05470 | 855551 |
| 85 | 334 | 328 | 3436209 | 3368481 | 1,02737 | 3436209 |
| 86 | 148 | 138 | 1060097 | 1534994 | 1,00153 | 1060097 |
| 87 | 49 | 48 | 517876 | 504697 | 1,01548 | 517876 |
| 88 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| TOTAL | 23451 | 21358 | 304359876 | 280410585 | 0,0 | 304359876 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights

# Table 13. Nonresponse Adjustments for Weight Set W4

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 1 | 219 | 140 | 2822110 | 1852505 | 1,58875 | 2822110 |
| 2 | 230 | 144 | 2077487 | 1717122 | 1,55940 | 2677687 |
| 3 | 123 | 80 | 1753155 | 1291424 | 1,65499 | 1753155 |
| 4 | 106 | 101 | 1981050 | 1393865 | 1,42231 | 1981050 |
| 5 | 776 | 558 | 10410440 | 7234274 | 1,43965 | 10410440 |
| 6 | 907 | 591 | 12200550 | 9170123 | 1,44331 | 12200550 |
| 7 | 345 | 247 | 4989792 | 3676122 | 1,27493 | 4989792 |
| 8 | 277 | 238 | 4004401 | 3042810 | 1,29935 | 4004401 |
| 9 | 412 | 273 | 5330498 | 3878801 | 1,05888 | 5330498 |
| 10 | 745 | 483 | 10023798 | 6584158 | 1,54114 | 10023798 |
| 11 | 459 | 338 | 6485071 | 4974232 | 1,30373 | 6485071 |
| 12 | 726 | 527 | 10117133 | 7695491 | 1,31845 | 10117133 |
| 13 | 665 | 263 | 4386353 | 3044177 | 1,44185 | 4386353 |
| 14 | 1180 | 451 | 15892526 | 6858458 | 2,31715 | 15892526 |
| 15 | 427 | 273 | 6223107 | 4120438 | 1,51016 | 6223107 |
| 16 | 447 | 325 | 6795952 | 5197468 | 1,30750 | 6795952 |
| 17 | 149 | 98 | 2046983 | 1252393 | 1,63446 | 2046983 |
| 18 | 127 | 88 | 1816377 | 1202451 | 1,51006 | 1816377 |
| 19 | 47 | 32 | 631131 | 425408 | 1,48992 | 631131 |
| 20 | 480 | 392 | 4812610 | 5337438 | 1,23900 | 4812610 |
| 21 | 449 | 318 | 4567849 | 4515421 | 1,44118 | 4567849 |
| 22 | 140 | 128 | 2050278 | 1808435 | 1,13398 | 2050278 |
| 23 | 85 | 71 | 1262515 | 1050706 | 1,20159 | 1262515 |
| 24 | 379 | 251 | 4840458 | 3119755 | 1,50026 | 4840458 |
| 25 | 421 | 293 | 5386035 | 3823278 | 1,40927 | 5386035 |
| 26 | 193 | 148 | 2629813 | 2009336 | 1,30988 | 2629813 |
| 27 | 208 | 154 | 2750881 | 2128705 | 1,29397 | 2750881 |
| 28 | 567 | 391 | 7199256 | 5129146 | 1,40360 | 7199256 |
| 29 | 506 | 348 | 7886978 | 4904337 | 1,59516 | 7886978 |
| 30 | 216 | 152 | 3083551 | 2159772 | 1,42772 | 3083551 |
| 31 | 173 | 137 | 2453012 | 1997327 | 1,22815 | 2453012 |
| 32 | 532 | 358 | 7164470 | 5077580 | 1,41100 | 7164470 |
| 33 | 885 | 530 | 11977869 | 7813111 | 1,53305 | 11977869 |
| 34 | 590 | 425 | 8030668 | 6395009 | 1,34959 | 8030668 |
| 35 | 771 | 505 | 11105945 | 8583598 | 1,29352 | 11105945 |
| 36 | 316 | 153 | 3910928 | 2139911 | 1,82761 | 3910928 |
| 37 | 753 | 216 | 9397118 | 3312540 | 2,83683 | 9397118 |
| 38 | 226 | 158 | 3284703 | 2483417 | 1,32295 | 3284703 |
| 39 | 262 | 188 | 3911751 | 2884539 | 1,35725 | 3911751 |
| 40 | 386 | 301 | 5072502 | 3961192 | 1,28055 | 5072502 |
| 41 | 355 | 278 | 5080388 | 3832773 | 1,32551 | 5080388 |
| 42 | 158 | 118 | 2040681 | 1622599 | 1,25766 | 2040681 |
| 43 | 62 | 49 | 919870 | 756199 | 1,21591 | 919870 |
| 44 | 521 | 418 | 7432696 | 5631298 | 1,31986 | 7432696 |
| 45 | 426 | 288 | 6042193 | 4180303 | 1,44540 | 6042193 |
| 46 | 175 | 142 | 2724488 | 2229356 | 1,22206 | 2724488 |
| 47 | 92 | 75 | 1421886 | 1230710 | 1,15539 | 1421886 |
| 48 | 104 | 71 | 928037 | 660567 | 1,40491 | 928037 |
| 49 | 60 | 24 | 525869 | 209412 | 2,10514 | 525869 |
| 50 | 43 | 31 | 478842 | 381609 | 1,25506 | 478842 |
| 51 | 308 | 258 | 3889031 | 2680143 | 1,45089 | 3889031 |
| 52 | 200 | 124 | 2003542 | 1526885 | 1,51089 | 2003542 |
| 53 | 71 | 53 | 775053 | 609849 | 1,27089 | 775053 |
| 54 | 60 | 42 | 660203 | 482753 | 1,58758 | 660203 |
| 55 | 131 | 92 | 1243188 | 928549 | 1,36039 | 1243188 |
| 56 | 94 | 59 | 966318 | 576911 | 1,67505 | 966318 |
| 57 | 47 | 30 | 580335 | 455581 | 1,11125 | 580335 |
| 58 | 58 | 33 | 628897 | 474202 | 1,48253 | 628897 |
| 59 | 180 | 142 | 1849371 | 1428816 | 1,29615 | 1849371 |
| 60 | 152 | 98 | 1574888 | 1019471 | 1,54551 | 1574888 |
| 61 | 56 | 38 | 572676 | 413329 | 1,38552 | 572676 |
| 62 | 27 | 20 | 354773 | 257087 | 1,37783 | 354773 |
| 63 | 62 | 47 | 589119 | 416039 | 1,31356 | 589119 |
| 64 | 43 | 25 | 392062 | 202368 | 1,81750 | 392062 |
| 65 | 208 | 204 | 2911181 | 2123325 | 1,37105 | 2911181 |
| 66 | 161 | 115 | 1594802 | 1243292 | 1,28240 | 1594802 |
| 67 | 56 | 45 | 657399 | 552752 | 1,18932 | 657399 |
| 68 | 201 | 138 | 1739247 | 1288488 | 1,34978 | 1739247 |
| 69 | 73 | 43 | 681698 | 415215 | 1,64174 | 681698 |
| 70 | 78 | 59 | 742696 | 510501 | 1,45467 | 742696 |
| 71 | 357 | 235 | 3624348 | 2311413 | 1,56789 | 3624348 |
| 72 | 160 | 109 | 1787153 | 1294528 | 1,38108 | 1787153 |
| 73 | 55 | 41 | 598113 | 440807 | 1,35709 | 598113 |
| 74 | 46 | 35 | 537645 | 397706 | 1,35196 | 537645 |
| 75 | 201 | 130 | 1903908 | 1218339 | 1,56271 | 1903908 |
| 76 | 130 | 83 | 1335953 | 770458 | 1,72013 | 1335953 |
| 77 | 86 | 69 | 869852 | 680127 | 1,26892 | 869852 |
| 78 | 61 | 50 | 693828 | 554093 | 1,24788 | 693828 |
| 79 | 155 | 119 | 1507503 | 1161147 | 1,29805 | 1507503 |
| 80 | 105 | 68 | 1040748 | 667[illegible] | 1,55836 | 1040748 |
| 81 | 57 | 37 | 655876 | 3[illegible] | 1,69719 | 655876 |
| 82 | 38 | 29 | 346846 | 27[illegible] | 1,28879 | 346846 |
| 83 | 178 | 123 | 1737687 | 1162773 | 1,49443 | 1737687 |
| 84 | 89 | 64 | 855551 | 630748 | 1,35758 | 855551 |
| 85 | 336 | 263 | 3438209 | 2706[illegible] | 1,27208 | 3438209 |
| 86 | 149 | 108 | 1060997 | 1224799 | 1,35548 | 1060997 |
| 87 | 49 | 43 | 517876 | 457876 | 1,13017 | 517876 |
| 88 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0,0 | 0 |
| TOTAL | 21651 | 15635 | 304359976 | 209119871 | 0,0 | 304359876 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights

# Table 14. Nonresponse Adjustments for Weight Set W5

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 1 | 219 | 208 | 2622118 | 2259385 | 1.00000 | 2622118 |
| 2 | 230 | 201 | 2077447 | 2044740 | 1.01564 | 2077447 |
| 3 | 123 | 119 | 1753155 | 1709525 | 1.02732 | 1753155 |
| 4 | 146 | 140 | 1941858 | 1935558 | 1.00326 | 1941858 |
| 5 | 776 | 731 | 10410448 | 9991288 | 1.03219 | 10410448 |
| 6 | 907 | 778 | 12209550 | 12063208 | 1.01212 | 12209550 |
| 7 | 345 | 329 | 8739792 | 8712351 | 1.00315 | 8739792 |
| 8 | 277 | 259 | 8004831 | 7986758 | 1.00226 | 8004831 |
| 9 | 412 | 348 | 5330898 | 5068928 | 1.05170 | 5330898 |
| 10 | 745 | 588 | 10023794 | 8283208 | 1.21013 | 10023794 |
| 11 | 459 | 411 | 4485071 | 5942408 | 1.00773 | 4485071 |
| 12 | 726 | 668 | 10117133 | 9212392 | 1.09821 | 10117133 |
| 13 | 805 | 334 | 6386353 | 8954608 | 1.28706 | 6386353 |
| 14 | 1189 | 804 | 15092526 | 9302271 | 1.70806 | 15092526 |
| 15 | 627 | 330 | 6223107 | 4998602 | 1.24495 | 6223107 |
| 16 | 447 | 383 | 6795952 | 5867575 | 1.15829 | 6795952 |
| 17 | 149 | 148 | 2046983 | 2041130 | 1.00286 | 2046983 |
| 18 | 127 | 118 | 1816377 | 1807118 | 1.00953 | 1816377 |
| 19 | 47 | 45 | 831131 | 815133 | 1.02001 | 831131 |
| 20 | 689 | 658 | 6612610 | 6208169 | 1.06515 | 6612610 |
| 21 | 849 | 392 | 6507849 | 5826723 | 1.11678 | 6507849 |
| 22 | 148 | 135 | 2050278 | 1974078 | 1.03813 | 2050278 |
| 23 | 85 | 82 | 1262515 | 1237858 | 1.01993 | 1262515 |
| 24 | 379 | 373 | 6868058 | 6507127 | 1.01813 | 6868058 |
| 25 | 821 | 397 | 5388035 | 5112813 | 1.05381 | 5388035 |
| 26 | 193 | 189 | 2629813 | 2594581 | 1.01358 | 2629813 |
| 27 | 208 | 203 | 2754481 | 2699100 | 1.02052 | 2754481 |
| 28 | 567 | 539 | 7199256 | 6856715 | 1.04985 | 7199256 |
| 29 | 586 | 488 | 7886978 | 6905713 | 1.13552 | 7886978 |
| 30 | 216 | 202 | 3043551 | 2844428 | 1.06997 | 3043551 |
| 31 | 173 | 162 | 2453012 | 2288908 | 1.07169 | 2453012 |
| 32 | 532 | 438 | 7164470 | 6242048 | 1.14770 | 7164470 |
| 33 | 885 | 675 | 11977889 | 9980419 | 1.23733 | 11977889 |
| 34 | 590 | 532 | 8830668 | 7886928 | 1.09830 | 8830668 |
| 35 | 771 | 692 | 11145945 | 10032218 | 1.11101 | 11145945 |
| 36 | 310 | 191 | 3910928 | 2599321 | 1.50460 | 3910928 |
| 37 | 753 | 312 | 9397118 | 4588712 | 2.04788 | 9397118 |
| 38 | 228 | 177 | 3284703 | 2739801 | 1.19906 | 3284703 |
| 39 | 269 | 210 | 3911751 | 3285875 | 1.19047 | 3911751 |
| 40 | 386 | 378 | 5072502 | 4984957 | 1.02579 | 5072502 |
| 41 | 355 | 327 | 5080388 | 4723863 | 1.07547 | 5080388 |
| 42 | 150 | 143 | 2040681 | 1952854 | 1.04497 | 2040681 |
| 43 | 62 | 62 | 919470 | 919470 | 1.00000 | 919470 |
| 44 | 521 | 499 | 7432696 | 7150751 | 1.03940 | 7432696 |
| 45 | 426 | 367 | 6082193 | 5265213 | 1.15198 | 6082193 |
| 46 | 175 | 164 | 2724048 | 2579247 | 1.05631 | 2724048 |
| 47 | 92 | 88 | 1421888 | 1374893 | 1.03418 | 1421888 |
| 48 | 108 | 101 | 926037 | 898798 | 1.03256 | 926037 |
| 49 | 68 | 58 | 525869 | 493422 | 1.06652 | 525869 |
| 50 | 43 | 40 | 478842 | 455292 | 1.05537 | 478842 |
| 51 | 388 | 367 | 3849031 | 3692531 | 1.04238 | 3849031 |
| 52 | 200 | 178 | 2003842 | 1755796 | 1.14116 | 2003842 |
| 53 | 71 | 68 | 775053 | 714082 | 1.08538 | 775053 |
| 54 | 68 | 51 | 866203 | 570882 | 1.15727 | 866203 |
| 55 | 131 | 125 | 1263188 | 1220598 | 1.03490 | 1263188 |
| 56 | 96 | 88 | 968318 | 905395 | 1.06950 | 968318 |
| 57 | 47 | 46 | 506335 | 496891 | 1.01892 | 506335 |
| 58 | 50 | 50 | 628947 | 628897 | 1.00000 | 628947 |
| 59 | 180 | 169 | 1849371 | 1752768 | 1.05510 | 1849371 |
| 60 | 152 | 137 | 1574888 | 1453526 | 1.08349 | 1574888 |
| 61 | 56 | 47 | 572676 | 476853 | 1.20297 | 572676 |
| 62 | 27 | 25 | 354773 | 311973 | 1.13719 | 354773 |
| 63 | 62 | 62 | 589119 | 589119 | 1.00000 | 589119 |
| 64 | 43 | 37 | 392062 | 318435 | 1.23088 | 392062 |
| 65 | 288 | 280 | 2911181 | 2694053 | 1.08060 | 2911181 |
| 66 | 161 | 148 | 1594402 | 1486053 | 1.07291 | 1594402 |
| 67 | 56 | 50 | 657399 | 595416 | 1.10373 | 657399 |
| 68 | 201 | 198 | 1739247 | 1649041 | 1.04206 | 1739247 |
| 69 | 73 | 71 | 681698 | 668532 | 1.01969 | 681698 |
| 70 | 78 | 78 | 782696 | 681888 | 1.08958 | 782696 |
| 71 | 357 | 343 | 3624348 | 3472496 | 1.04361 | 3624348 |
| 72 | 180 | 152 | 1787153 | 1694855 | 1.05136 | 1787153 |
| 73 | 55 | 49 | 598113 | 541298 | 1.10497 | 598113 |
| 74 | 46 | 41 | 537645 | 489208 | 1.07708 | 537645 |
| 75 | 201 | 194 | 1903908 | 1877269 | 1.01419 | 1903908 |
| 76 | 130 | 123 | 1335953 | 1282858 | 1.04139 | 1335953 |
| 77 | 86 | 84 | 869852 | 858919 | 1.01226 | 869852 |
| 78 | 63 | 59 | 693828 | 668447 | 1.03836 | 693828 |
| 79 | 155 | 150 | 1507503 | 1443298 | 1.04021 | 1507503 |
| 80 | 105 | 95 | 1048748 | 976853 | 1.07373 | 1048748 |
| 81 | 57 | 53 | 655976 | 602168 | 1.08928 | 655976 |
| 82 | 36 | 28 | 346686 | 311890 | 1.11156 | 346686 |
| 83 | 178 | 169 | 1737487 | 1670823 | 1.03519 | 1737487 |
| 84 | 89 | 87 | 855551 | 811177 | 1.05470 | 855551 |
| 85 | 336 | 328 | 3410259 | 3386801 | 1.02737 | 3410259 |
| 86 | 184 | 138 | 1848947 | 1534946 | 1.00153 | 1848947 |
| 87 | 49 | 48 | 517476 | 509597 | 1.01548 | 517476 |
| 88 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| TOTAL | 23451 | 20178 | 308359876 | 268877528 | 0.0 | 308359876 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights

# Table 15. Nonresponse Adjustments for Weight Set W6

| A. | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 1 | 219 | 219 | 2822118 | 2822118 | 1.00000 | 2822118 |
| 2 | 234 | 214 | 2677407 | 2574948 | 1.03978 | 2677407 |
| 3 | 125 | 125 | 1753156 | 1753156 | 1.00000 | 1753156 |
| 4 | 144 | 144 | 1981858 | 1981858 | 1.00000 | 1981858 |
| 5 | 774 | 774 | 10410448 | 10410448 | 1.00000 | 10410448 |
| 6 | 907 | 851 | 12200550 | 11527768 | 1.04938 | 12200550 |
| 7 | 345 | 345 | 4949792 | 4949792 | 1.00000 | 4949792 |
| 8 | 277 | 277 | 4004601 | 4004601 | 1.00000 | 4004601 |
| 9 | 812 | 812 | 5330898 | 5330898 | 1.00000 | 5330898 |
| 10 | 745 | 678 | 10023794 | 9260319 | 1.07249 | 10023794 |
| 11 | 459 | 459 | 6485071 | 6485071 | 1.00000 | 6485071 |
| 12 | 724 | 724 | 10117133 | 10117133 | 1.00000 | 10117133 |
| 13 | 665 | 665 | 6386353 | 6386353 | 1.00000 | 6386353 |
| 14 | 1180 | 792 | 15892526 | 11473367 | 1.38517 | 15892526 |
| 15 | 427 | 427 | 6223107 | 6223107 | 1.00000 | 6223107 |
| 16 | 447 | 447 | 6795952 | 6795952 | 1.00000 | 6795952 |
| 17 | 149 | 149 | 2086983 | 2086983 | 1.00000 | 2086983 |
| 18 | 127 | 118 | 1816377 | 1711188 | 1.06147 | 1816377 |
| 19 | 47 | 47 | 631131 | 631131 | 1.00000 | 631131 |
| 20 | 489 | 489 | 6812618 | 6812618 | 1.00000 | 6812618 |
| 21 | 449 | 424 | 6507849 | 6253701 | 1.04064 | 6507849 |
| 22 | 144 | 144 | 2050278 | 2050278 | 1.00000 | 2050278 |
| 23 | 85 | 85 | 1262515 | 1262515 | 1.00000 | 1262515 |
| 24 | 379 | 379 | 6680858 | 6680858 | 1.00000 | 6680858 |
| 25 | 421 | 418 | 5388035 | 5388035 | 1.01575 | 5388035 |
| 26 | 193 | 193 | 2629813 | 2629813 | 1.00000 | 2629813 |
| 27 | 208 | 208 | 2754681 | 2754681 | 1.00000 | 2754681 |
| 28 | 567 | 567 | 7199256 | 7199256 | 1.00000 | 7199256 |
| 29 | 566 | 529 | 7886978 | 7393298 | 1.06677 | 7886978 |
| 30 | 214 | 214 | 3083551 | 3083551 | 1.00000 | 3083551 |
| 31 | 173 | 173 | 2453012 | 2453012 | 1.00000 | 2453012 |
| 32 | 532 | 532 | 7164878 | 7164878 | 1.00000 | 7164878 |
| 33 | 885 | 783 | 11977809 | 10690041 | 1.09950 | 11977809 |
| 34 | 590 | 590 | 8630668 | 8630668 | 1.00000 | 8630668 |
| 35 | 771 | 771 | 11185945 | 11185945 | 1.00000 | 11185945 |
| 36 | 310 | 310 | 3910928 | 3910928 | 1.00000 | 3910928 |
| 37 | 753 | 450 | 9397118 | 6260918 | 1.50195 | 9397118 |
| 38 | 220 | 220 | 3284703 | 3284703 | 1.00000 | 3284703 |
| 39 | 262 | 262 | 3911751 | 3911751 | 1.00000 | 3911751 |
| 40 | 386 | 386 | 5072502 | 5072502 | 1.00000 | 5072502 |
| 41 | 335 | 340 | 5080338 | 4990179 | 1.03899 | 5080338 |
| 42 | 150 | 150 | 2040681 | 2040681 | 1.00000 | 2040681 |
| 43 | 62 | 62 | 919478 | 919478 | 1.00000 | 919478 |
| 44 | 521 | 521 | 7432896 | 7432896 | 1.00000 | 7432896 |
| 45 | 424 | 399 | 6042193 | 5708325 | 1.05869 | 6042193 |
| 46 | 175 | 175 | 2724688 | 2724688 | 1.00000 | 2724688 |
| 47 | 92 | 92 | 1421868 | 1421868 | 1.00000 | 1421868 |
| 48 | 104 | 104 | 928037 | 928037 | 1.00000 | 928037 |
| 49 | 60 | 60 | 525869 | 525869 | 1.00000 | 525869 |
| 50 | 43 | 43 | 478842 | 478842 | 1.00000 | 478842 |
| 51 | 384 | 384 | 3849031 | 3849031 | 1.00000 | 3849031 |
| 52 | 200 | 200 | 2003642 | 2003642 | 1.00000 | 2003642 |
| 53 | 71 | 71 | 775053 | 775053 | 1.00000 | 775053 |
| 54 | 60 | 60 | 660203 | 660203 | 1.00000 | 660203 |
| 55 | 131 | 131 | 1243188 | 1243188 | 1.00000 | 1243188 |
| 56 | 96 | 96 | 986318 | 986318 | 1.00000 | 986318 |
| 57 | 47 | 47 | 506335 | 506335 | 1.00000 | 506335 |
| 58 | 50 | 50 | 626897 | 626897 | 1.00000 | 626897 |
| 59 | 180 | 180 | 1849371 | 1849371 | 1.00000 | 1849371 |
| 60 | 152 | 152 | 1574888 | 1574888 | 1.00000 | 1574888 |
| 61 | 56 | 56 | 572676 | 572676 | 1.00000 | 572676 |
| 62 | 27 | 27 | 354773 | 354773 | 1.00000 | 354773 |
| 63 | 62 | 62 | 549119 | 549119 | 1.00000 | 549119 |
| 64 | 43 | 43 | 392062 | 392062 | 1.00000 | 392062 |
| 65 | 288 | 288 | 2911181 | 2911181 | 1.00000 | 2911181 |
| 66 | 161 | 161 | 1594802 | 1594802 | 1.00000 | 1594802 |
| 67 | 56 | 56 | 657399 | 657399 | 1.00000 | 657399 |
| 68 | 201 | 201 | 1739247 | 1739247 | 1.00000 | 1739247 |
| 69 | 73 | 73 | 681498 | 681498 | 1.00000 | 681498 |
| 70 | 78 | 78 | 782696 | 782696 | 1.00000 | 782696 |
| 71 | 357 | 357 | 3624348 | 3624348 | 1.00000 | 3624348 |
| 72 | 180 | 180 | 1787153 | 1787153 | 1.00000 | 1787153 |
| 73 | 55 | 55 | 598113 | 598113 | 1.00000 | 598113 |
| 74 | 44 | 44 | 537645 | 537645 | 1.00000 | 537645 |
| 75 | 201 | 201 | 1903908 | 1903908 | 1.00000 | 1903908 |
| 76 | 130 | 130 | 1335953 | 1335953 | 1.00000 | 1335953 |
| 77 | 84 | 84 | 869852 | 869852 | 1.00000 | 869852 |
| 78 | 61 | 61 | 693828 | 693828 | 1.00000 | 693828 |
| 79 | 155 | 155 | 1507503 | 1507503 | 1.00000 | 1507503 |
| 80 | 105 | 105 | 1068748 | 1068748 | 1.00000 | 1068748 |
| 81 | 57 | 57 | 655876 | 655876 | 1.00000 | 655876 |
| 82 | 38 | 38 | 386808 | 386808 | 1.00000 | 386808 |
| 83 | 178 | 178 | 1737807 | 1737807 | 1.00000 | 1737807 |
| 84 | 89 | 89 | 855551 | 855551 | 1.00000 | 855551 |
| 85 | 336 | 336 | 3438209 | 3438209 | 1.00000 | 3438209 |
| 86 | 148 | 148 | 1660077 | 1660077 | 1.00000 | 1660077 |
| 87 | 49 | 49 | 517478 | 517478 | 1.00000 | 517478 |
| 88 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| 89 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| TOTAL | 23451 | 22394 | 308359878 | 292867909 | 0.0 | 308359878 |

KEY TO COLUMN HEADINGS:

A. Weighting Class

B. Total Number of Students

C. Number of Respondents

D. Sum of Unadjusted Weights for All Students

E. Sum of Unadjusted Weights for Respondents

F. Adjustment Factor

G. Sum of Adjusted Weights